MARIKOVSKIY, P.I.

Attack of the predaceous bug Anthocoris pilosus Jak. on man. Med. paraz. i paraz. bol. 34 no.2:238-239 Mr-Ap '65.
(MIRA 18:11)

1. Kazakhskiy institut zashchity rasteniy, Alma-Ata.

MARIKOVSKIY, Pavel Ustinovich, prof., doktor biol. nauk;
GENDLIN, M., red.

[Hunting for insects; a naturalist's notebook] Okhota za nasekomymi; zametki naturalista. Alma-Ata, "Kazakhstan," 1965. 111 p. (MIRA 18:11)

MARKOVSKIY, P.I.

Introduction of new preparations to protect plants from injurious insects. Zash. rast. ot vred. i bol. 5 no. 12 182 '60.

MARIKOVSKIY, P.I.

A new ant species Polyergus nigerrimus Marik., sp. n. (Hymenoptera, Formicidae) and some characteristics of its biology. Ent. oboz. 42 no.1:110-114 '63. (MIRA 16:8)

1. Institut zoologii AN Kazakhskoy SSR, Alma-Ata.
(Kyzyl region—Ants)

MARIKOVSKIY, P.I.

Interspecific relations of ants as related to the utilization of the common red forest ant (Formica rufa L.) in protecting forests from injurious insects. Vop. ekol. 7:107-108 '62. (MIRA 16:5)

1. Tomskiy gosudarstvennyy universitet.
(Siberia, Western--Ants)
(Siberia, Western--Forest insects--Biological control)

MARIKOVSKIY, P.I.

Various forms of social life of the carpenter ant Camponotus herculeanus. Biul.MOIP.Otd.biol. 67 no.3:122-124 My-Je '62. (MIRA 15:11)

(Tien Shan--Carpenter ants)

MARIKOVSKIY, P.I.

Materials on ants (Formicinae) of the central and lower Ili basin. Trudy Inst. zool. AN Kazakh. SSR 18:163-176 '62. (MIRA 17:3)

MARIKOVSKIY, P. I.

A new species of gall midges (Diptera. Itonididae) Dasyneura sibirica Marik. sp. n., injuring the pea tree Caragana arborescens in Western Siberia. Nauch. dokl. vys. shkoly; biol. nauki no.3: 21-22 '62. (MIRA 15:7)

1. Rekomendovana kafedroy zoologii bespozvonochnykh Tomskogo gosudarstvennogo universiteta imeni V. V. Kuybysheva.

(SIBERIA, WESTERN--GALL GNATS)
(SIBERIA, WESTERN--PEA TREE--DISEASES AND PESTS)

MATESOVA, G.Ya.; MITYAYEV, I.D.; YUKHNEVICH, L.A.; MARIKOVSKIY, P.I., doktor biol. nauk, prof., otv. red.; ALFEROVA, P.F., tekhn. red.

[Insects and mites, pests of fruit and berry crops in Kazakhstan] Nasekomye i kleshchi - vrediteli plodovo-iagodnykh kul'tur Kazakhstana. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1962. 203 p. (MIRA 15:12)

(Kazakhstan—Fruit—Diseases and pests)
(Kazakhstan—Insects, Injurious and beneficial)

MARIKOVSKIY, Pavel Iustinovich, doktor biol. nauk; YAKOVLEVA, V., red.; TURABAYEV, B., tekhn. red.

[The rosy valley] Rozovaia dolina. Alma-Ata, Kazakhskoe gos. izd-vo, 1962. 81 p. (MIRA 16:4)
(Soviet Central Asia--Insects)
(Soviet Central Asia--Desert fauna)

MARIKOVSKIY, P.I.

Myrmecophilous plants. Biul. MOIP. Otd. biol. 66 no.5:98-101 S-O '61. (MIRA 14:10)

(MYRMECOPHILOUS PLANTS)

MARIKOVSKIY, P.I.; AGAFONOVA, Z. Ya.

A new gall gnat species (Diptera, Itonididae) injurious to the brome grass and some features of its biology. Ent. oboz. 40 no.2:272-274 '61. (MIRA 14:6)

1. Tomskiy gosudarstvennyy universitet, Tomsk i Vsesoyuznyy institut zashchity rasteniy, Leningrad.
(Gall gnats)
(Brome grass--Diseases and pests)

MARIKOVSKIY, P.I.

New gall gnat species (Diptera, Itonididae) in the fauna of south-eastern Kazakhstan. Ent. oboz. 40 no.1:37-50 '61. (MIRA 14:4)
(Kazakhstan—Gall gnats)

MARIKOVSKIY, P.I.

Studies in insect biology. Izv. AN Kir. SSR. Ser. biol. nauk 3 no.1: 219-221 '61. (MIRA 14:12)
(MANTIDS) (WASPS) (INSECTS--BEHAVIOR)

MARIKOVSKIY, P.I.

Activity of ixodid ticks. Soob.DVFAN SSSR no.11:150-151 '59.
(MIRA 13:11)

1. Tomskiy gosudarstvennyy universitet.
(Ticks)

MARIKOVSKIY, P.I.

New species of gall gnats (Diptera, Itonididae) from the piedmont plain of the Trans-Ili Ala-Tau and Kirghiz Range. Zool.zhur. 37 no.12:1842-1853 D '58. (MIRA 12:1)

1. Biological Faculty of Tomsk State University.
(Trans-Ili Ala-Tau-Gall gnats)
(Kirghiz Range--Gall gnats)

MARIKOVSKIY, P.I.

Communication in ants [with summary in English]. Ent. oboz. 37 no. 3:557-562 '58. (MIRA 11:10)
(Ants)

MARIKOVSKIY, P. I. (Tomsk)

"On general entomology".

Theoretical and Practical Work Carried out by Entomologists.
reported at All-Union Entomological Conference, Georgian Dept. A-U
Entomological Society, Tbilisi, 4-9 Oct 1957.
Vestnik AN SSSR, 1958, v. 28, No. 1, p. 129-30 (author Gilyarov, M. S.)

MARIKOVSKIY, P.I.

Studies on the biology of ants. Report No. 1. Uch. zap. Biol.-pochv. fak. Kir. un. no.7:295-300 '58. (MIRA 15:10)

1. Stat'ya predstavlena professorom F.A. Turdakovym.
(Ants)

P

COUNTRY : USSR
CATEGORY : GENERAL & SPEC. ZOOLOGY. INSECTS
Biology and Zoology
ABS. JOUR : Ref Zhur -Biologiya, No. 4 , 1959, No. 16190

AUTHOR : Marikovskiy, P.I.
INST. : Inst. of Zoology and Parasitology, AS Kirgiz SSR
TITLE : The Ant-Reaper - Messor barbarus - as an Indicator of Ground Waters in the Desert Zone.

ORIG. PUB.: Tr. In-ta zool. i parazitol. AN KirgSSR. 1957, vyp. 6, 197-199

ABSTRACT : The desert ant-reaper, M. barbarus (erroneously called the "bearded ant".) Reference) gathers supples consisting exclusively of dry seeds of plants, and it needs a great deal of water. It colonizes only where there are ground waters. Colonies of M. barbarus are located in the soil. Closer to the surface chambers are made for the hatching of the young, and vertical channels lead downward to the water-supplying layers. Seed supplies are located there,

CARD: 1/2

MARIKOVSKIY, P.I.

The saksaul psocid Mesopsocus hiemalis, sp. n. (Psocoptera) and some interesting features of its biology [with summary in English]. Zool. zhur. 36 no.7:1026-1030 Jl '57. (MLRA 10:9)

1. Institut zoologii i parazitologii Akademii nauk Kirgizskoy SSR.
(Chu Valley--Psocids) (Saksaul) (Forest insects)

USSR / General and Specialized Zoology. Insects. P
Systematic and Faunistic.

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 78213

from the galls and are described: Turkmenomyia lanugiviva g.n. sp.n., Dibaldratia asiatica sp.n., Stephaniella karakumensis sp.n., Careopalpis devletshinae ap.n. The genuine stimulus for the making of the gall is T. lanugiviva; the other 5 species are symbionts. The relation between the symbionts is not yet clear. -- M. H. Kovaleva.

Card 2/2

USSR / General and Specialized Zoology. Insects. P
Systematic and Faunistic.

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 78213

Author : Marikovskiy, P. I.
Inst :
Title : New Species of Gall Midges (Diptern, Itonididae) in the Saltwort Salsola rigida Pall. in North-eastern Karakum.

Orig Pub : Entomol. Obozreniye, 1957, 36, No. 4, 935-943

Abstract : The galls on the Saltwort Salsola rigida Pall have the form of light fluffy balls, 7-15 mm in diam. The twig, carrying the gall, transpierces it along the axis, and is distinctly thickened in the place of contact. From the thickening, the larval cells run radially. The spaces between them is filled out with the deformed leaves, densely covered with white bristles, and forming a a white ball. The following species were bred

Card 1/2

MARIKOVSKIY, P.I.

New gall gnats (Diptera, Itonididae) from the saltwort Salsola rigida Pall. in northeastern Kara Kum. Ent. oboz. 36 no.4:935-943 '57. (MLRA 10:9)

1. Institut zoologii Akademii nauk KirSSR, Frunze.
(Kara Kum--Gall gnats) (Saltwort--Diseases and pests)

MARIKOVSKIY, P.I

MARIKOVSKIY, P.I.

Some features of the sound-producing apparatus of locusts (Acrididae, Orthoptera). Veterinariia 34 no.5:139-146 My '57. (MIRA 10:6)
(Locusts) (Sound production by animals)

MARIKOVSKIY, P.I.

Biological characteristics of spider venom. Veterinariia 34 no.5: 135-137 My '57. (MLRA 10:6)
(Spiders) (Venom)

MARIKOVSKIY, P.I.

MARIKOVSKIY, P.I.

A survey of the insect pests of saksauls. Veterinariia 34 no.5:111-134 My '57. (MLRA 10:6)

(Saksaul--Diseases and pests)
(Insects, Injurious and beneficial)

MARIKOVSKIY, P.I.

Materials on the fauna and biology of gall gnats (Diptera, Itonididae) of the desert zone. Veterinariia 34 no.5:103-109 My '57.
(Gall gnats) (MIRA 10:6)

MARIKOVSKIY, P., professor.

Underground dwellers. [Un.nat. no.7:37 Jl '57. (MLRA 10:8)
(Tarantulas)

MARIKOVSKIY, P.I.

The harvester ant Messor barbarus as a ground-water indicator in desert regions. Trudy Inst. zool. i paraz. AN Kir. SSR no.6:197-199 '57. (MIRA 11:3)

(Ants) (Water, Underground)

USSR / General and Special Zoology. Insects. Insect and Mite Pests. P

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54386.

Abstract: development, the passage of the larva is slightly larger than the girth of its body. -- A. P. Adrianov.

Card 4/4

USSR / General and Special Zoology. Insects. Insect and Mite Pests. P

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54386.

Abstract: high moisture content. Mating places that are characteristic for the borer are those that are suitable for habitation and for the development of the larvae, and are settled in mass. More frequently it is the female that starts boring a passage, and the male assists in the boring of the hole by propping its head against the tip of the upper wing of the female. The male also throws outside the dust resulting from boring. The starting passages are longest in the less moist sections of (L). The horizontal branches of the passages go deeper into (L), more frequently crossing the annual growth rings, and sometimes bending alonside the rings only at the end. The diameter of the passage is slightly larger than the diameter of the cylin-

Card 2/4

USSR / General and Special Zoology. Insects. Insect and Mite Pests. P

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54386.

Abstract: drical body of the bark beetle. Therefore, turns in the passages are not possible. The passage has one branch (for the male "bachelor"), two branches (for a female and a male), or three branches (for 2 females and a male). The copulation of the bark beetles was observed at the point of branching off from the passage. The infection of (L) with fungus takes place at the start of the passage. In the egg holes, the epicoelial fibers of the fungus penetrate the lignin in the direction of the future larval passages. Having laid the eggs, the female seals the egg chambers for the protection of the offspring from enemies. There is no excrement in larvae. The larva completely utilizes the (L) saturated with the fungus. By the end of the

Card 3/4

USSR / General and Special Zoology. Insects. Insect and Mite Pests. P

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54386.

Author : Marikovskiy, P. I.
Inst : Inst. of Zoology and Parasitology, AS Kirghiz SSR.
Title : Materials on the Biology of the Conifer Wood Borer Trypodendron lineatum Ol.

Orig Pub: Tr. In-ta zool. i parazitol. AN KirgSSR, 1956, 4 vyp. 6, 79-87.

Abstract: In the spruce forest of Tyan'-Shan', the wood borer is encountered at any altitude starting with the lower boundary of the spruce forest. The borer settles on fresh stumps, less frequently on logs (on the ground and in stacks), and on the dying trees. An absolute prerequisite for the borer's settlement is the presence of lignin (L) with a

Card 1/4

MARIKOVSKII, P.I.

New species of gall gnat (Diptera, Itonididae) in the U.S.S.R.
Ent.obez. 35 no.1:184-195 '56. (MLRA 9:10)

1.Institut zoologii Akademii nauk Kirgizskoy SSR, gorod Frunze.
(Gall gnats)

MARIKOVSKIY, P.I.

USSR/Ecoparasitology - Acarina and Insect-Vectors of Disease Pathogens. G-1

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19663

Author : Marikovskiy, P.I.
Inst :
Title : Ecology of Fleas (Aphaniptera) of the Amur-Ussuri Region.

Orig Pub : Materialy k poznaniyu fauny i flory SSSR, Otd. zool., 1956, No 34(49). Ektoparazity, No 3, 163-166

Abstract : 879 fleas were gathered from different animals and nests (734 fleas from 234 chipmunks). Ceratophyllus (C. n. [illegible] tamias) predominated. Fleas appear on chipmunks 10 days after the animals waken and disappear somewhat earlier before they begin to hibernate. The coincidence is noted of curves of change in abundance of C. tamias and average daily temperature. This flea species is found on squirrels, Letyaga [illegible] (and their nests), and also in individual specimens on northern poka , kolonka. [?] and ussurian whitespined woodpecker.

Card 1/1

the tree to become feeble and led to its being inhabited by other species. The same thing happened at a mass invasion of the Hauser bark beetle and at a common invasion of a few bark beetle species. The mass invasion by one of the species was characteristic of the colonization of the tyan'shan fir by bark beetles.

USSR/General and Special Zoology. Insects P

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25823

Author : Marikovskiy P.I.
Inst : Institute of Zoology and Parasitology, Kirghizia SSR.
Title : The Interspecies Relations of the Bark Beetles, inhabiting the Tyan'shan Fir Trees. (Mezhvidovyye otnosheniya korcyedov, obitayushchikh na tyan shanskoy yeli)

Orig Pub : Tr. In-ta zool. i parazitol. AN KirgSSR, 1956, vyp. 5, 73-77

Abstract : Nine species of bark beetles were found on the Tyan'shan fir tree--Picea shrenkiana. In comparison with the number of bark beetles inhabiting Eurasian firs this number was small and the species were largely endemic. Continuous ties with Tyan'shan fir trees, largely isolated from other forest bodies, explained the highdegree of adaptation of the beetles to this tree and the more or less established inter-species relationships of the bark beetles. The Hauser beetle, nearest morphologically to the typograph bark beetle, was of the

Card : 1/3

USSR/General and Special Zoology. Insects P

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25823

greatest value economically. It mostly inhabited the trunk in the region of thick and transitional bark, but might inhabit the whole trunk and even the basis of the thick branches. The Spasivtsev bark beetle lived on the trunk (with the exception of the region of the thick bark) and on branches 1-1.5 cm in diameter. The trunk in the region of thin bark was the optimal habitation zone. When the tree was inhabited previously by a different species the Spasivtsev bark beetle was pushed into the branches. The typically spiral form of the passages on thin branches was often destroyed. Schrenk's micrograph which inhabits the branches of sick trees, might be pushed back to the ends of branches by the Spasivtsev bark beetle. The relations among the various species were, however, not only antagonistic. There was a certain degree of estrangement both in time and space between the kirghiz micrograph inhabiting thin branches ready to die and Schrenk's bark beetle, although they sometimes lived together. The mass intrusion of the kirghiz bark beetle caused

Card : 2/3

MARIKOVSKIY, P.I.

Interspecific relationship of bark beetles living on the Tien Shan spruce. Trudy Inst.zool.i paraz.AN Kir.SSR no.5:73-77 '56. (MLRA 10:5)
(Kirghizistan--Bark beetles) (Spruce--Diseases and pests)

MARIKOVSKIY, Pavel Iustinovich; GAGARIN, V.G., redaktor; SEREBRYAKOV, V.I., tekhnicheskiy redaktor

[Tarantula and black wolf spider; morphology, biology, toxicity] Tarantul i karakurt; morfologiia, biologiia, iadovitost'. Frunze, izd-vo Akademii nauk Kirgizskoi SSR, 1956. 279 p. (MLRA 10:1)
(Tarantulas) (Spiders)

MARIKOVSKIY P.I.

New gall midges of the genus Asiodiplosis Marik. (Diptera, Itonididae) from the desert of Kazakhstan. Zool.zhur. 34 no.2:336-346 Mr-Ap '55. (MLRA 8:6)

1. Institut zoologii Akademii nauk Kazakhskoy SSR.
(Kazakhstan--Gall gnats)

MARIKOVSKIY, P.I.

New gall gnats (Diptera, Itonididae) from saksaul. Part 2. Ent. oboz. 34:298-312 '55. (MLRA 9:5)
(Gall gnats)

MARIKOVSKIY, P., doktor biologicheskikh nauk

Naturalist's stories. Vokrug sveta no.5:48-51 My '55.
(MLRA 8:6)
(Insects, Injurious and beneficial)

MARIKOVSKIY, P.I.

New species of gall midges (Diptera, Itonididae) in Central Asia.
Trudy Inst.zool.i paraz.AN Kir.SSR no.4:21-26 '55. (MLRA 10:5)
(Kara Kum--Diptera) (Issyk-Kul region--Diptera)

MARIKOVSKIY, P.I.

Snail butterfly (Apterona sp.) and its pedogenetic development.
Trudy Inst.zool.i paraz.AN Kir.SSR no.4:13-20 '55. (MLRA 10:5)
(Chu Valley--Bagworm moths)
(Pedogenesis)

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh.-Biol., No 9, 10 May 1957, 34833

variability is analogous to morphological, physiological and biochemical variability. Change of behavior as a plastic characteristic of an organism represents one of the possibilities of adaptation, which, inherited from long activity, compensates for the conservatism of heredity and can serve as a cause of the reconstruction of the structure of the organism.

Card : 7/7

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh.-Biol., No 9, 10 May 1957, 34833

An intensified separation of aspects in connection with the increasing number of the population is discussed as a reaction of behavior conducive to the weakening of the negative consequences of the increasing density of the population. This reaction is distinctly expressed in the karakurt in the flight of the numerous posterity freed from the cocoon when the small spiders of the sedentary tarantula settle in a new place with the mother, having made a special migration. If there is an insufficiency of shaded shelters even the female karakurts migrate. The question of the causes of the increase of vital activity in reproduction is discussed as a possible result of the reaction of resettlement. Three types of changeability in behavior are distinguished: 1) adaptive reactions to the environment, serving as material for selection; 2) the transitional type of change, consolidated in a part of the population in the form of an instinct; and 3) variations of instincts, producing a divergence of appearance as an indication of behavior. In conclusion, it is noted that a wide adaptive

Card : 6/7 -9-

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh.-Biol., No 9, 10 May 1957, 34833

very important by unsteady factor, its nourishment. Not only those animals with which a historical connection has been made, may become the object of nourishment, but also those to which an individual habit has been established. The role of the behavior of tarantulas and karakurts in their sexual biology is noted. The change of the latter is connected with the prolonged absence of males in the northern districts which suppressed in the female the instinct of destroying the male after copulation. The absence of this reaction of destroying the male from separate individuals even when there is an abundance of males represents a stable hereditary feature, whcih, in the opinion of the author, serves as an indirect confirmation of the hereditability of acquired reflexes. The adaptive changes in behavior of the tarantula in its relationship with its enemy, the ichneumon fly, Gelis Marikavskiy Kusin, which serve to keep down the population of spiders, and also the changes in behavior of the tarantula toward the cricket which serves as a food for it.

Card : 5/7 -8-

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh.-Biol., No 9, 10 May 1957, 34833

the karakurt usually shelters itself in rodents' burrows. Migrations from one place to another affect the organization of the karakurt (there appears the protective black coloring of the base of the belly, adaptations of the crawling legs, the character of the structure of the lair and web changes, in the struggle with the inhabitants of the burrows an unusual virulence to mammals is developed). In this case changes in behavior causes several structural adaptations to the change of environment (a transfer to other surroundings). The behavior of various types of tarantulas is examined in detail in connection with their construction of burrows. The great possibilities of acquiring individual building habits is noted. The observations and experiments concerned the behavior of karakurts and tarantulas in relation to the object of their diet. The conclusion is made that the significant changeability of behavior and the ease with which habits in obtaining food are adapted, ensures the plasticity of the organism and its adaptation to the

Card : 4/7 -7-

Category: USSR/General Division. General Problems. Philosophy. Metho- A-1
dology.

Abs Jour: Referat Zh.-Biol., No 9, 9 May 1957, 34833

from the wandering form to the sedentary takes place in the whole population without any changes in the structure of the organism. The author considers that the formation of customary behavior in the tarantula comes, besides by the natural selection of instincts, by means of a gradual inheritance of habits practiced for a long time. At the same time it is ascertained that, being a creature of habit, the tarantula, in the periods between moultings, returns to the wandering form of life. Lastly it is explained that it is not so much by a hereditary conservation of behavior, but by the fact that the physical organism did not succeed in undergoing fundamental changes. In the case given, the form of behavior and its adaptive development is related to the structure of the organism which in its known phases hinders the development of behavior. An analogous process was studied in the behavior of the karakurt. The young karakurt in desert regions builds a net in the spring, when vegetation begins to grow. When summer heat arrives, the

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Category: USSR/ General Division. General Problems. Philosophy. Metho- A-1
dology.

Abs Jour: Referat Zh.-Biol., No 9, 9 May 1957, 34833

organism as a whole, although J. B. Lamarck already wrote about such a dependence. A. N. Severtsov, in his work "Evolution and Psychism" (1922) expressed his opinion about the possibility of active adaption by way of a change of behavior without a change of the organism. C. Darwin, considering the evolution of behavior (instincts) to be a product of natural selection, admitted the principle of Lamarck. The research of I. P. Pavlov about the physiological regularity in the behavior of animals, met criticism from the geneticists of the formal trend, such as W. A. Wagner. The author conducted prolonged observations of the variability of the behavior of poisonous spiders in field conditions. The origin of the usual form of life of the tarantula is traced in detail (the tarantula belongs to the family of wandering spiders), how the tarantula at the time of its moulting, finds shelter for itself, which becomes a trap for prey and a shaded shelter in hot weather. The change in the tarantula's behavior

Card : 2/7

MARIKOVSKIY, P.I.

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh. Biol., No 9, 10 May 1957, 34833

Author : Marikovskiy, P. I.
Inst : not given
Title : Behavior as a Factor of the Evolutionary Process

Orig Pub: Izv. AN KirgSSR, 1955, vyp. 1, 121-140

Abstract: Stated are the results of the research of the author in a thorough study of the biology of the poisonous spiders, karakurt /Latrodectus tredecimguttatus/ and tarantula, in the aspect of their evolution. The organism is examined as a complex system of reactions to the forces of the surrounding environment, and behavior as its quickest reaction to this environment following which there is a change in the animal organism. Behavior as an unstable property opposes the conservative structure slowly yielding to change. It is noted that zoopsychology to the present time studies the evolution of behavior irrelative of the

Card : 1/7 -4-

MARIKOVSKIY, P.I.

New genera and species of the gall midge (Diptera, Cecidomyidae) in southeastern Kazakhstan. Izv.AN Kaz.SSR no.125:128-139 '53. (MLRA 6:12)

(Kazakhstan--Gall gnats) (Gall gnats--Kazakhstan)

MARIKOVSKIY, P.I.

New species of gall gnats (Diptera, Itonididae) which damage saksaul.
Ent.oboz. 33:331-341 '53. (MLRA 7:5)

1. Institut zoologii Akademii nauk Kazakhskoy SSR, Alma-Ata.
(Gall gnats) (Saksaul--Diseases and pests)

MARIKOVSKIY, P.I.

Means and objects of the hunt from motifs of cliff drawings in the Chulak Mountains (Kazakh S.S.R.). Zool.zhur. 32 no.6:1064-1073 N-D '53.
(MLRA 6:12)

1. Institut zoologii Akademii nauk Kazakhskoy SSR.
(Chulak Mountains--Art, Primitive) (Art, Primitive--Chulak Mountains)

MARIKOVSKIY, P.I.

Materials on the biology and venomousness of the scorpion Buthus eupeus (C.Koch.). Trudy Inst.zool.AN Kazakh.SSR 2:160-166 '53.
(Kazakhstan--Scorpions) (MLRA 10:2)

MARIKOVSKIY, P. I.

May/Jun 53

USSR/Biology - Spiders, Poisonous

"Mass Propagation of the Poisonous Karakurt Spiders, Latrodectus Tredecimguttatus (Rossi)," P. I. Marikovskiy, Inst of Zool, Acad Sci KazSSR

Zool Zhur, Vol 32, No 3, pp 444-447

A detailed account of the climatic, geographical, and other factors contributing to the propagation of the karakurts in the USSR. The last mass increase of these spiders was noted in 1940-1944.

Source #264T12

1. MARIKOVSKIY, P. I.

2. USSR (600)

4. Moths

7. Tamarisk moth - Amblypalpis tamaricella Dan. and the phenomenon of connected diapause of its parasite. Zool. zhur. 31 No.5, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

MARIKOVSKIY, P. I.

34151. Marikovskiy, P. I. O pervoy pomoshchi pri otravlenii yadom Karakurta. Zdravookhraneniye kazakhstana, 1949, No. 5, s. 44

SO: Knizhnaya Letopis' No. 6, 1955

SHNITNIKOV, V.N., doktor biologicheskikh nauk, zasluzhennyy deyatel' nauki ~~KazSSR~~; MARIKOVSKIY, P.I., doktor biologicheskikh nauk, redaktor; GUSEVA, N., redaktor; BARANOV, M., redaktor; KHIGIROVICH, I., tekhnicheskiy redaktor; ZLOBIN, M., tekhnicheskiy redaktor

[Our animals in photographs from nature] Nashi zhivotnye v fotografiiakh s natury. Alma-Ata, Kazakhskoe gos. izd-vo. Vol.2. 1949. 271 p. Vol.5. 1954 308 p. (MLRA 9:10)
(Kazakhstan--Zoology)

MARIKOVSKIY, P.I.

Treatment for bites of the poisonous karakurt spider (Latrodectus tredecimguttatus (Rossi), 1790). Izv.AN Kazakh.SSR.Ser.paraz. no.7: 106-117 '49. (MLRA 9:5)

(Spiders)

MARIKOVSKIY, P. I.

21632 MARIKOVSKIY, P. I. Biologiya nayezdnika Gelis marikovskii k. Izvestiya Akad. nauk Kazakh. SSR, No. 63, Seriya zool. vyp.2, 1948, s. 215-19. - Rezyume na Kazakh. yaz.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva 1949

MARIKOVSKIY, P.I.

21004 Marikovskiy, P.I. O. Yadovitosti Tarantuba Lycosa Singoriensis 1770 (Laxm) Izvestiya Akad Nauk Kazakh SSR No. 44, Seriya Parazitol, vyp6, 1948, x.183-92- Rezyume Na. Kazakh yaz-Bibliogr s.191-92

SO: LETOPIS ZHURNAL STATEY-Vol. 28, Moskva, 1949

MARIKOVSKIY, P. I. PA 31/49T99

USSR/Medicine - Spiders, Bites Aug 48
Medicine - Zoology

"The Significance of the Poisonous Spider Karakurt L. Tredecimguttatus in Veterinary Medicine," P. I. Marikovskiy, Lab of Toxic Animals, Inst of Zool, Acad Sci Kazakh SSR, 2¼ pp

"Veterinariya" No 8

Describes life cycle of karakurt spider. Determines effect of its bite on sheep by experimental tests.

[redacted] 31/49T99

MARIKOVSKIY, P. I.

"Data of Observations on Behavior of Adult Ixodidae Ticks in a Natural Setting"

SOURCE: Meditsinskaya Parazit i Parazit Bol, Vol XIV, No 6, 1945, pp-60-66

(NIH)

CTS 50, 28 Dec 53

MARIKOVSKIY, P. I.

"New Method of Protecting Man Against Tick Vectors of Spring-Summer Encephalitis"

SOURCE: Meditsinskaya Parazitelogiya i Parazit Bol, Vil XIV, No 6, 1945, pp 66-68

(NIH)

CTS 50, 28 Dec 53

MARIKOVSKIY, P.

From the Tomsk taiga to the forests of the Tien Shan. Nauka i zhizn' 29 no.7:42 Jl '62. (MIRA 16:6)

1. Otdel entomologii AN Kazakhskoy SSR, Alma-Ata.
(Tomsk Province--Ants)
(Forest insects--Biological control)

ROMANOV, Yu.; YEZHOV, N. (Kishinev); MARKOV, Yu. (Khar'kov); ADESTOV, G. (Gor'kiy); MURIN, N.; MARIKOVSKIY, P. (Alma-Ata); DOROFEYEV, V.

Advice of specialists. Za rul. 20 no.8:18-19 Ag '62. (MIRA 16:6)
(Automobiles)

MARIKOVSKIY, I.P., inzh.

Length of the pouring branch of a mold conveyor. Lit. proizv. no.11:41 N '65. (MIRA 18:12)

TISLENKO, Yu.T., inzh.; MARIKOVSKIY, I.P., inzh.; ROMANOV, O.B., inzh.

Die casting of textile machine flyers. Lit. proizv. no.9:37-38 S '65. (MIRA 18:10)

L 60139-65

ACCESSION NR: AP5016507

microscope pictures it is concluded that during elongation of the specimen the spherulite structure breaks down and a new fibrillar structure is generated which gradually spreads out over the bulk of the polymer. Orig. art. has: 3 photographs and 1 illustration.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe (Physico-Technical Institute)

SUBMITTED: 20Jul64 ENCL: 00 SUB CODE: EC,OC

NO REF SOV: 007 OTHER: 007

Card 2/2

L 60189-65 EWT(m)/EPF(c)/EWG(v)/EWP(j)/T Pc-4/Pe-5/Pr-4 JAJ/RM

ACCESSION NR: AP5016507 UR/0190/65/007/006/1041/1044
678.01:53+678.675

AUTHORS: Zhurkov, S. N.; Marikhin, V. A.; Myasnikova, L. P.; Slutsker, A. I.

TITLE: Electron microscopic study of the orientation of polycapramide

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 6, 1965, 1041-1044, insert facing p. 1042, and top half of insert facing p. 1043

TOPIC TAGS: electronmicroscopy, polycapramide, polymer, tensile strength, tensile stress, resin, caprone / JEM 5Y electron microscope

ABSTRACT: The transformation of the original spherulite structure of caprone into an oriented structure was studied in order to elucidate the disorder → order processes in polymers subjected to a longitudinal stress. The polymer studied was caprone (polycaprolactam) prepared from a solution of caprone in formic acid. The investigation was carried out on an electron microscope of type JEM-5Y. The specimens were elongated at room temperature to 35, 75, and 230% of their original length. The direction of elongation on the electron microscope photographs was determined after S. N. Zhurkov, V. A. Marikhin, L. P. Romankova, and A. I. Slutsker (Vysokomolek. soyed., 4, 2821, 1962). On the basis of electron

Card 1/2

L 38542-65

ACCESSION NR: AP5005279

were then dried and small-angle diffraction measurements were made in apparatus described by the authors elsewhere (FTT v. 4, 2534, 1962; PTE no. 5, 89, 1959). Cu Ka radiation with wavelength 1.54 Å was used. A nonmonotonic variation of the diffraction intensity (a decrease followed by an increase) was caused by the selective concentration of sorbent in the amorphous regions of the polymers. This phenomenon is discussed on the basis of modern notions concerning the structure of the polymers, and it is suggested that it can be useful to estimate the density of amorphous regions in crystallizing polymers. "The authors are sincerely greteful to S. N. Zhurkov for interest in the work." Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 20Jul64 ENCL: 00 SUB CODE: OC, SS

NR REF SOV: 004 OTHER: 011

Card 2/2 mb

ACCESSION NR: AP4007977

microscope studies on the structure of cleavage surfaces of three crystalline polymer specimens: capron (polycaprolactam), polyethylene, and lavsan (polyethyleneterephthalate) in both oriented and nonoriented states. They made observations on platinoquartz replicas of cleavage surfaces. The polymers were found to have a heterogeneous structure in both states. In nonoriented specimens the supermolecular structural elements, with dimensions of 1000-2000 A, have a chaotic arrangement. Fibrillar structure was observed in uniaxially stretched specimens, the structure being oriented along the stretch axis. The gross-sectional diameter of the fibrillar structure is on the order of 1000 A. These fibrillar formations are characteristically "beadlike" in oriented polyethylene and lavsan. "The authors express their sincere gratitude to S. N. Zhurkov for his guidance and constant interest in the work." Orig. art. has: 1 figure.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR (Physico-technical Institute AN SSSR)

SUBMITTED: 26Apr62 DATE ACQ: 20Jan64 ENCL: 00

SUB CODE: MA NO REF SOV: 005 OTHER: 008

Card 2/2

L 38542-65 EPF(a)/EWA(k)/EWP(j)/EWT(l)/EWT(m)/ETC(t)/T Pc-4/Pr-4 RM/LHB

ACCESSION NR: AP5005279 S/0181/65/007/002/0441/0445

AUTHOR: Marikhin, V. A.; Slutsker, A. I.; Yastrebinskiy, A. A. 30 28 B

TITLE: Variation of intensity of x-ray diffraction at small angles during the contrasting of polymers

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 441-445

TOPIC TAGS: crystallizing polymer, polycaprolactame, polyethylene, x ray diffraction, polymer molecule conformation

ABSTRACT: The purpose of the investigation was to study the intensity of small-angle x-ray diffraction in crystallizing polymers such as polycaprolactame (caprone) and polyethylene, when heavy atoms such as iodine and osmium are introduced into the polymers from solutions (I dissolved in CCl_4 or OsO_4 dissolved in H_2O) or from vapors. Most investigations were made with a uni-axially oriented film of polycaprolactame, 70 μ thick. The samples were placed in ampoules containing solution of I in CCl_4 of varying concentration, and kept in a thermostat for three days, to ensure uniform absorption of iodine over the volume of the polymer. The samples

1/2

ACCESSION NR: AP4007977 S/0190/63/005/012/1795/1798

AUTHORS: Marikhin, V. A.; Romankova, L. P.; Slutsker, A. I.

TITLE: Electron microscopic study of the structure of crystalline polymers

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 12, 1963, 1795-1798

TOPIC TAGS: polymer, crystalline polymer, crystalline polymer structure, supermolecular structure, capron, poly(caproamide), poly(hexanamide), high pressure polyethylene, polyethylene, lavsan, terephthalic acid, ethylene ester, polymer, oriented polymer, unoriented polymer, fibrillar oriented supermolecular structure, chaotic supermolecular structure, nylon 6, nylon, dacron, poly(ethylene terephthalate)

ABSTRACT: The authors emphasize the growing importance of information on supermolecular structure, the heterogeneity of structure resulting from zones in a polymer having different degrees of ordering. These zones may be tens and hundreds of angstroms across. This structure determines to a considerable degree the physico-chemical properties of the polymer. The authors conducted electron

Card 1/2

MARIKHIN, V.A.; ROMANKOVA, L.P.

Preparation of microsieves for electron microscopy. Zav.lab. 29 no.8:975 '63. (MIRA 16:9)

1. Leningradskiy fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR. (Electron microscopy)

MARIKHIN, V.A.

Obtaining structureless replicas for electron microscopy. Zav.lab. 29 no.8:973 '63. (MIRA 16:9)

1. Leningradskiy fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR.

(Electron microscopy)

angle scattering. The chamber was evacuated, the measurement was carried out with CuK_α radiation, $\lambda = 1.54$ Å. Maximum scattering was observed at 7.2' with an intensity of 0.06 p/sec, with a primary beam intensity of $2.5 \cdot 10^5$ p/sec. Under these conditions repeated measurements, were necessary in order to determine the maximum, particularly of the "control points" at 5.5, 7.0, and 8.5'. From $\varphi'_{max} = 7.2' = 2.09 \cdot 10^{-3}$ rad, the iterative period of the diffraction centers was calculated, equalling 740 Å. These results obtained by two methods confirm more specifically the assumption of alternating zones of heterogeneity, of the order of several 100 Å being present in oriented polymers. There are 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: May 10, 1962

Card 2/2

S/181/62/004/009/027/045
B101/B186

AUTHORS: Marikhin, V. A., Slutsker, A. I., and Yastrebinskiy, A. A.

TITLE: Study of the structure of oriented polyethylene terephthalate (Lavsan)

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2534-2538

TEXT: The nature of the strength of oriented polyethylene terephthalate (Lavsan) was investigated by combining electron microscopy with small-angle x-ray scattering, on the assumption that the supermolecular structure affects the mechanical properties of polymers. High-crystalline Lavsan specimens measuring 100·8·1.5 mm were oriented by subjecting them to an elongation of 430% at 150°C. For the electron-microscopic study, specimens were split in liquid nitrogen along the elongation axis, and platinum-quartz replicas of the split surface were photographed in the electron microscope with a magnification of 20,000. The surface was found to consist of bead-shaped fibrils oriented in parallel to the elongation axis. The distance between the "bead" centers 700-800 Å. These results were confirmed by measurement of small-

ZHURKOV, S.N.; MARIKHIN, V.A.; ROMANKOVA, L.P.; SLUTSKER, A.I.

Electron microscopic study of the structure of oriented polymethylmethacrylate. Vysokom.soed. 4 no.2:282-284 F '62. (MIRA 15:4)

1. Leningradskiy fiziko-tekhnicheskiy institut im. A.F.Ioffe.
(Methacrylic acid) (Electron microscopy)

MARIKHIN, V.A., ZHURKOV, S.N., ROMANKOVA, L.P.

Electron-microscopic study of the supermolecular structure of polymers on cleavage surfaces.

Report presented at the 13th Conference on High-molecular compounds Moscow, 8-11 Oct 62

SLUTSKER, A.I.; MARIKHIN, V.A.

Measurement of the transparency of a light-scattering medium as a means of studying its inhomogeneities. Opt. i spektr. 10 no.4 512-517 Ap '61. (MIRA 14:3)
(Light--Scattering)

88675

S/051/61/010/002/002/003
E201/E291

Some Problems in the Theory of Scattering of Electromagnetic Radiation of Submicroscopic Non-Spherical Particles

the authors and S. N. Zhurkov (Fizika Tverdogo Tela, Vol. 1, 1752, 1959). Acknowledgements are made to S. N. Zhurkov, who directed this work, and to K. S. Shifrin for their advice. There are 8 figures and 8 references: 3 Soviet and 5 non-Soviet.

SUBMITTED: April 27, 1960

Fig. 2

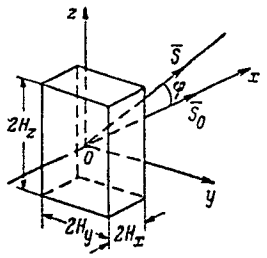

Рис. 2.

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Some Problems in the Theory of Scattering of Electromagnetic Radiation of Submicroscopic Non-Spherical Particles

slowly in the low-angle region than does the second factor, provided $H_x/H_z \lesssim 50$. Consequently we can take the first exponential factor to be equal to unity in the zeroth maximum region of the second factor. Since V, which is the volume of the particle, is $8H_xH_yH_z$, we finally obtain the following expression for X-rays.

$$dI = I_0\left(\frac{e^2}{mc^2}\right)^2 (n_i - n_a)^2 V^2 e^{-\frac{4\pi^2}{3}\left(\frac{H_z}{\lambda}\right)^2 \rho^2} d\omega. \qquad \text{Equation 8}$$

It follows from the above equation that the scattering function for X-rays is governed essentially by the dimension H_z (Ref. Fig. 2). In practical cases we usually have particles in the form of ellipsoids rather than rectangular parallellepipeds. The authors show that their expressions give scattering functions which are satisfactory for ellipsoidal particles and are quite close to the expressions obtained directly from Mie's theory. Details of applications of the expressions quoted above to systems of loosely-packed non-spherical oriented particles are given in a paper by

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Some Problems in the Theory of Scattering of Electromagnetic Radiation of Submicroscopic Non-Spherical Particles

$$q_x \simeq \pi \frac{H_x}{\lambda} \varphi^2; \quad q_z \simeq 2\pi \frac{H_z}{\lambda} \varphi. \qquad \text{Equation 5}$$

Allowing for the fact that in the zeroth maximum region the function $[(\sin q_z)/q]^2$ can be approximated by the Gaussian dependence $\exp(-q^2/3)$ and using:-

$$m = 1 - \frac{1}{2}\left(\frac{e^2}{m_e c^2}\right) \cdot \frac{\lambda^2}{\pi} (n_i - n_a) \qquad \text{Equation 6}$$

(e and m_e are the electron charge and mass; c is the velocity of light; n_i and n_a are the electron densities in the particle and in the medium respectively), we find that for X-rays the scattering function is

$$dI = I_0 \left(\frac{e^2}{m_e c^2}\right)^2 (n_i - n_a)^2 (8 H_x H_y H_z)^2 e^{-\frac{\pi^2}{3}\left(\frac{H_x}{\lambda}\right)^2 \varphi'^2} e^{-\frac{4\pi^2}{3}\left(\frac{H_y}{\lambda}\right)^2 \varphi'^2} d\omega. \qquad \text{Equation 7}$$

The first exponential factor in the above equation falls much more

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S/051/61/010/002/002/003
E201/E291

Some Problems in the Theory of Scattering of Electromagnetic Radiation of Submicroscopic Non-Spherical Particles

For visible light the scattering function (Eq. 4) is applicable without modifications. Assuming visible light to be of 5000 Å wavelength and the particles to be of dimensions of the order of H = 1000 Å, we find that q_x and q_z are smaller or equal to 2. Consequently the scattering function has non-zero values at all scattering angles φ, including 180°. The scattering function for visible light is most sensitive to the "ray" dimension H_x; it depends much less on H_z and is quite independent of H_y. For X-rays the situation is quite different because their wavelength (~1 Å) is small compared with the dimensions (H) of submicroscopic particles which are assumed to be of the order of 10-1000 Å. At H/λ values of 10-1000, the scattered X-ray radiation is mainly (~95%) concentrated at zero maxima of the functions $[(\sin q)/q]^2$ and, therefore, it lies at very low scattering angles, not greater than several degrees. This allows us to simplify the expressions for q using the condition $\sin \phi \rightarrow \phi$ for small ϕ. Then we find that

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Some Problems in the Theory of Scattering of Electromagnetic Radiation of Submicroscopic Non-Spherical Particles

found to be :- Equation 4

$$dI = I_0 \frac{9\pi^2}{\lambda^4}\left(\frac{m^2-1}{m^2+2}\right)^2 \cdot \frac{1+\cos^2\varphi}{2} \cdot (8H_xH_yH_z)^2 \left[\frac{\sin\left(4\pi\frac{H_x}{\lambda}\sin^2\frac{\varphi}{2}\right)}{4\pi\frac{H_x}{\lambda}\sin^2\frac{\varphi}{2}}\right]^2 \times$$

$$\times \left[\frac{\sin\left(2\pi\frac{H_z}{\lambda}\sin\varphi\right)}{2\pi\frac{H_z}{\lambda}\sin\varphi}\right]^2 \cdot d\omega. \qquad (4)$$

where I_0 is the intensity of incident radiation; m is the relative refractive index; λ is the wavelength of the incident light in the ambient medium; $\bar{s}_0$ and $\bar{s}$ are unit vectors representing the directions of the incident and scattered waves; φ is the scattering angle; H_x, H_y, H_z are explained in Fig. 2; $d\omega$ is the solid angle; and

$$q_x = 4\pi\frac{H_x}{\lambda}\sin\frac{\varphi}{2}; \quad q_z = 2\pi\frac{H_z}{\lambda}\sin\varphi. \quad \text{Equation 3}$$

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Some Problems in the Theory of Scattering of Electromagnetic Radiation of Submicroscopic Non-Spherical Particles

i.e. when $m = m_i/m_a$ is small. For X-rays the refractive indices of all substances are very close to unity and, therefore, the case of small m is always obtained. In the case of visible light one frequently meets with media such as gases or transparent solids containing particles which have a refractive index very close to that of the surrounding medium. The smallness of m makes it possible to calculate approximately the scattering function (defined as the angular distribution of the intensity of scattered radiation) by considering interference of waves scattered once by various parts of a given particle; the interference is considered at a point sufficiently far from the particle. It is shown that the approximate treatment is valid both for visible light and for X-rays, and that it is particularly suitable for non-spherical particles. Non-spherical particles are approximated by rectangular parallellepipeds shown in Fig. 2. The scattering function is

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S/051/61/010/002/002/003
E201/E291

9.9300

AUTHORS: Slutsker, A. I. and Marikhin, V. A.

TITLE: Some Problems in the Theory of Scattering of Electromagnetic Radiation of Submicroscopic Non-Spherical Particles

PERIODICAL: Optika i spektroskopiya, 1961, Vol. 10, No. 2, pp. 232-239

TEXT: Scattering of electromagnetic waves in a medium containing submicroscopic inhomogeneities is widely used to study colloidal suspensions, solutions of macromolecules, crystallites in polymers, two-phase solid systems, atmospheric clouds, etc. A complete and rigorous scattering theory, developed by Mie (1908), gives very cumbersome results which are difficult to use in practice. These results are particularly complex for non-spherical particles. It is consequently desirable to develop useful approximate methods. This is done in the present paper for the case when the absolute refractive index of the scattering particles (m_i) does not differ greatly from the absolute refractive index of the medium (m_a) in which the particles are located,

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66285

SOV/181-1-11-20/27

Determination of the Form of Submicroscopic Cracks in Deformed Polymers

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR Leningrad (Physico-technic Institute of the AS USSR, Leningrad)

SUBMITTED: June 15, 1959

Card 3/3

dispersed light and discussed. The dispersion indicatrix (according to formula (1)) for various angles of incidence and observation is shown in figure 1. The authors used this formula to determine the form of the submicroscopic cracks in deformed polymers. The result (the dispersion indicatrix for organic glass at λ = 3300 Å - λ is the wave length of light in the medium - and deformation at 60° C is shown in figure 2. The curves (1) and (2) give the angular distributions for the case in which the incident beam of light is parallel to the deformation axis (Curve 1), and for the case in which it is at right angles to it (Curve 2). In the former case the cavities on which the light was dispersed did not exceed 100 Å, whereas in the latter case they were approximately 600 Å. This means that the submicroscopic cracks were disk-shaped (lenticular), and that the larger diameter was at right angles to the acting force. Finally, the authors thank Professor K.S. Shifrin for giving valuable advice. There are 2 figures and 6 references, 4 of which are Soviet.

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4

MARIKHIN, V. A.

66285

SOV/181-1-11-20/27

~~24(6)~~ 24.4100

AUTHORS: Zhurkov, S.N., Slutsker, A.I., Marikhin, V.A.

TITLE: Determination of the Form of Submicroscopic Cracks in Deformed Polymers

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 11, pp 1752-1754 (USSR)

ABSTRACT: In two previous papers (Refs 1,2) the authors investigated light dispersion in deformed polymers and found that cavities measuring 100 Å are formed in the deformation. A theoretical investigation is undertaken in this paper concerning the form and origin of these cavities as connected with the decomposition of the material, which mainly starts at cracks oriented at right angles to the direction of force. The theoretical considerations (only outlined in the present communication) are based on a number of simplifying assumptions, i.e. that the scattering particles are parallelepipeds, the incident beam of light is at right angles to one of the boundary surfaces, and the plane of observation is parallel to one of the two other surfaces. With the help of these assumptions and the approximation method of wave interference formula (1) is derived for the angular distribution of the

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Investigation of Submicroscopic Porosity of Deformed Polymers SOV/181-1-7-21/21

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut AN SSSR (Leningrad Physics and Technical Institute of the AS USSR)

SUBMITTED: August 18, 1958

Card 3/3

Investigation of Submicroscopic Porosity of Deformed Polymers

ment are displayed partly by tables, partly by diagrams. On the basis of these results it was possible to state that the opacifying is caused by formation of submicroscopical cracks (rupture of continuity) in the deformed polymers. The scattering experiments were completed by scattering investigations by means of X-rays using an arrangement as described in reference 10. According to the results obtained the dimensions of the inhomogeneities were evaluated and satisfactory agreement with values as obtained by light scattering was found. The concentration of the cracks may be calculated by means of optical and radiographical measurements and satisfactory agreement in both cases was noted. The evaluations of density decrease of the polymers on the strength of scattering experiments and of direct measurements were found to agree well. Professor K. S. Shifrin displayed interest in this work and supported it by valuable advice and discussions. There are 7 figures, 2 tables, and 10 references, 6 of which are Soviet.

MARIKHIN, V. A., A. I. SLUTSKER, S. N. ZHURKOV

"The Submicroscopic Porosity of Defromed Polymers."

report presented at the Conference on Investigation of Mechanical Properties of Non-Metals, by the Intl. Society of Pure and Applied Physics and the AS USSR, at Leningrad, 19-24 May 1958.
(Vest. Ak Nauk SSSR, 1958, no. 9, pp. 109-111)

66265
SOV/181-1-7-21/21

24 (6) 5.3830
AUTHORS: Zhurkov, S. N., Marikhin, V. A., Slutsker, A. I.

TITLE: Investigation of Submicroscopic Porosity of Deformed Polymers

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 7, pp 1159 - 1164 (USSR)

ABSTRACT: Turbidity in several polymers (mainly in organic glasses and nitrocellulose, polyvinyl chlorides, styroflex, cellulose di- and triacetate etc) was experimentally produced by selecting various temperature and dynamic deformation conditions. The sample plates were 1-8 mm thick, the film samples were 100-150 μ thick. The samples of organic glass were stretched under temperatures between 60 and 80°C, the film samples under temperatures between 110-130°. For both cases the stretch was 1-3 kg/mm^2. The opacifying during stretching was measured by 3 different methods by light scattering experiments: 1. The indicatrix of the scattering was recorded. 2. The angular dependence of the polarization degree of the scattered light was measured. 3. The scattering coefficient as a function of the used wavelength of the light was investigated. The used equipments are schematically represented and the results of measure-

4

MARIKHIN, F.

But the contractors are slow. Zhil.-kom. khoz. 11 no.7:14-15 Jl '61. (MIRA 14:7)

1. Zaveduyuzhchiy oblastnym otdelom kommunal'nogo khozyaystva, g. Kirov.
(Kirov Province—Construction industry)

MARIKASHVILI, S.P.; CHAKHNASHVILI, Sh.A.

Quantitative characteristics of the reflex discharge. Trudy Inst. fiziol. AN Gruz.SSR. 7:155-186 '48. (MLRA 9:8)
(REFLEXES)

MARIKASHVILI, S. P.

Mbr., Lab. Physiology Sense Organs, Physiol. Inst. im. I. P. Pavlov, Dept. Biol. Sci., Acad. Sci., -1942-.

"On the Function of Proprioceptors of the Skeletal Muscle of the Frog when Acted upon with Certain Chemical Agents," Dok. AN, 36, No. 3, 1942;

"On the Influence of Motor Denervation upon the Activity of the Proprioceptors of the Skeletal Muscle of the Frog," ibid., No. 8, 1942;

"The Influence of Stimulation of Anterior and Posterior Roots on the Activity of Propriceptors of the Skeletal Muscle of the Frog," ibid., 37, No. 2, 1942.

MARIK, Vladimir, dr.

Draft of the Czechoslovak Labor code, its concept, structure and main features. Prace mzda 11 no.1 14-14 Ja '63 (MIRA 17:8)

1. Vedouci pracovne pravniho oddeleni, Ustredni rada odboru.

MARIK, Vladimir, dr.

45 years of the Soviet labor law. Prace mzda 10 no.11:520-522 N '62.

1. Vedouci pracovne pravniho oddeleni, Ustredni rada odboru.

MARIK, Vladimir, dr.

Legal assistance offered by the Revolutionary Trade Unions is an important educational element. Prace mzda 9 no.3:121-123 Mr '61.

1. Vedouci pracovne pravniho oddeleni, Ustredni rada odboru.